



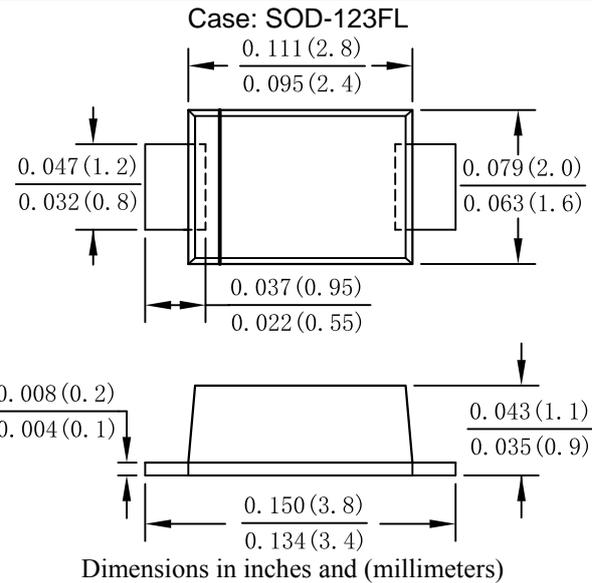
## Single Phase 1.0AMP Surface Mount Fast Recovery Rectifier

### Features

- Glass passivated die construction
- Ideal for surface mouted applications
- Low reverse leakage
- Metallurgically bonded construction
- High temperature soldering guaranteed:  
260°C/10 seconds,0.375"(9.5mm) lead length,  
5 lbs. (2.3kg) tension
- Plastic material-UL flammability 94V-0

### Mechanical Data

- Case: SOD-123FL, molded plastic
- Terminals: plated leads solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting position: Any



### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single Phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

TYPE NUMBER	SYMBOL	F1	F2	F3	F4	F5	F6	F7	UNITS
Peak Repetitive Reverse Voltage	$V_{RRM}$								V
Working Peak Reverse Voltage	$V_{RWM}$	50	100	200	400	600	800	1000	
DC Blocking Voltage	$V_{DC}$								
RMS Reverse Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Average Rectified Output Current @ $T_L=110^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave @ $T_j=125^\circ\text{C}$ Superimposed On Rated Load (JEDEC Method)	$I_{FSM}$	30							A
		24							
Non-Repetitive Peak Forward Surge Current 1.0ms Single half sine-wave @ $T_j=125^\circ\text{C}$ Superimposed On Rated Load (JEDEC Method)	$I_{FSM}$	60							A
		48							
10000 times of the wave surge current (time width 1ms, time interval 3s)	$I_{FSM}$	22.5							A
$I^2t$ Rating for Fusing ( $t < 8.3\text{ms}$ )	$I^2t$	3.735							$\text{A}^2\text{s}$
Forward Voltage @ $I_F=1.0\text{A}$	@ $T_A=25^\circ\text{C}$	1.3							V
	@ $T_A=125^\circ\text{C}$	1.2							
Peak Reverse Current @ $T_A=25^\circ\text{C}$	$I_R$	5.0							$\mu\text{A}$
At Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$		100							
Maximum reverse recovery time (NOTE 1)	$T_{rr}$	150			250	500		ns	
Typical Junction Capacitance (Note 2)	$C_J$	7							pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	120							$^\circ\text{C/W}$
	$R_{\theta JC}$	25							
	$R_{\theta JL}$	17							
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55to+150							$^\circ\text{C}$

Note:

1. Measured with  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=0.25\text{A}$ .
2. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C.
3. Device mounted on FR-4 substrate, 1"×1", 2oz, single-sided, PC boards with 0.1"×0.15" copper pad.



FIG. 1- FORWARD CURRENT DERATING CURVE

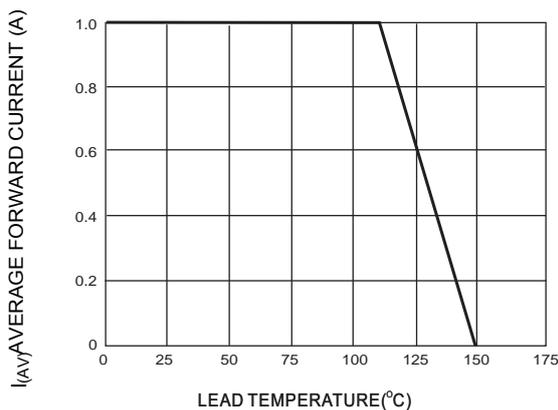


FIG. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

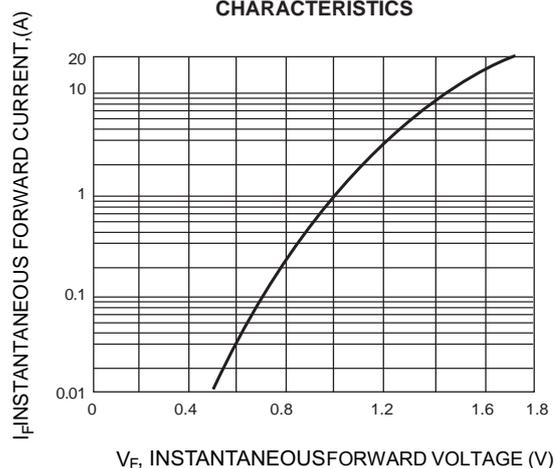


FIG. 3-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

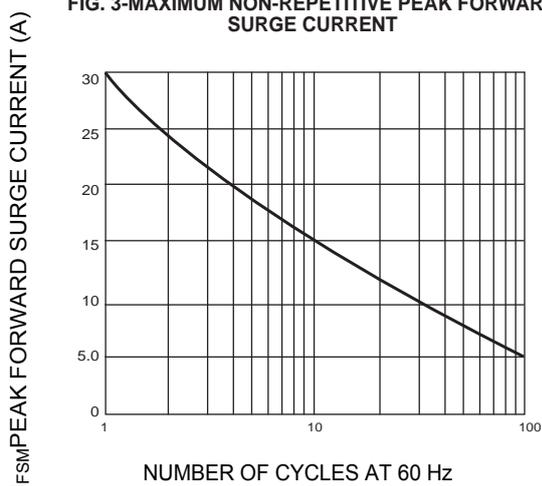


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

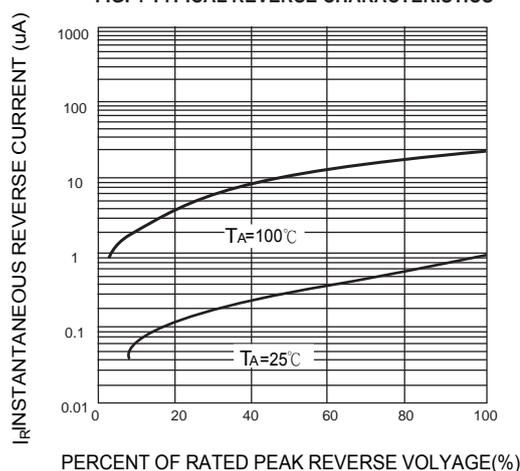


FIG. 5 TYPICAL JUNCTION CAPACITANCE

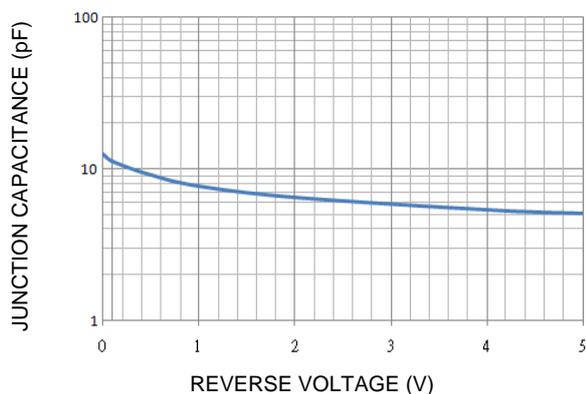


FIG. 6 Forward Power Dissipation

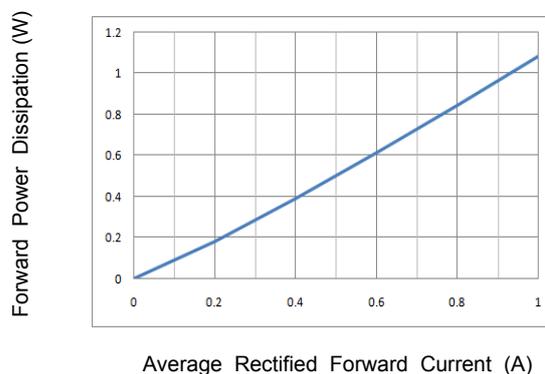
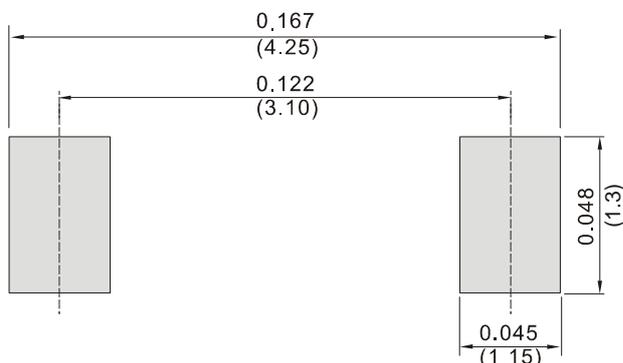


Fig.6 TYPICAL CAPACITANCE





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